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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,804	01/26/2001	Paul W. Dent	000875	8250

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EXAMINER	
BOCURE, TESFALDET	

ART UNIT	PAPER NUMBER
2631	12

DATE MAILED: 05/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/770,804	DENT ET AL.	
	Examiner	Art Unit	
	Tesfaldet Bocure	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *34-40* is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☒ Claim(s) *5-33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6&11* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. The Examiner has approved the Information Disclosure Statements (IDSs) received on 1/26/01 and 12/09/02 and the intitialed copies (two copies) of the 1449 are attached with this correspondence.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright (US patent number 4,422,047, newly cited).

Wright teaches a transceiver unit (see figure 2) for adaptively transmitting and receiving over a plurality of transmitting and receiving frequencies comprising: a means for balancing the impedance of the antenna to that of the amplifier (see col. 1, lines 11-36); a plurality of band pass filters (60) for filtering the received plurality of frequency and an adaptive amplifier for adaptively amplifying the signal to be transmitted or received according to the frequency band as in claims 1-3. The number of the amplifiers (102 and 70) is less than the number of the band pass filter (60) as in claim 4.

What Wright fails to teach is that the transceiver as having a plurality of amplifiers as in claim 1. However the system of **Wright** uses a single adaptive amplifier for adaptively amplifies the signal to be transmitted or received according the frequency spectrum as is the case in the instant application. Therefore, it would have been obvious to one of an ordinary skill in the art to use the single adaptive amplifier as oppose to claimed plurality of amplifiers for accommodating the plurality of transmit and receive frequencies at the time the invention was made.

Allowable Subject Matter

3. Claims 34-40 are allowed.

4. Claims 5-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The claimed subject matter in claims 5-40 are allowable because the prior art does not teach or fairly suggest the claimed "wireless communication devices for transmitting signals in a first plurality of transmit frequency bands and for receiving signals in a second plurality of receive frequency bands, the wireless communication device comprising: an adjustable matching network comprises a transmit band matching network for each of the plurality of transmit frequency bands each of the transmit band matching networks connected to a respective one of the third plurality of transmit power amplifiers and selectively connectable to the antenna, wherein each of the transmit band matching networks are configured to optimize antenna impedance matching for its corresponding transmit frequency band as in claim 5; wherein the adjustable matching network comprises a switch selectively connecting the antenna to either (a) one of the third plurality of transmit power amplifiers, or (b) one of the fourth plurality of receive band pass filters, the switch operating during frame periods of a Time Division Multiple Access signal format associated with the wireless communications network as in claim 6; wherein the adjustable matching network comprises a first bank of electromechanical switches selectively connecting the antenna to one of the third plurality of transmit power amplifiers, the first bank of electromechanical switches operational to change the antenna selective connection in response to a change in selection of one of the first plurality of transmit frequency bands as in claim 8;wherein the adjustable matching network comprises a second bank of electromechanical switches selectively connecting the antenna to one of the fourth plurality of receive band pass filters, the second bank of electromechanical switches operational to change the antenna selective connection in response to a change in selection of one of the second plurality of receive frequency bands as in claim 10;wherein the adjustable matching network comprises a receive band matching network for each of the second plurality of receive frequency

bands, each of the receive band matching networks connected to a respective one of the fourth plurality of receive band pass filters and selectively connectable to the antenna, wherein each of the receive band matching networks are configured to optimize antenna impedance matching for its corresponding receive frequency band as in claim 13; wherein the adjustable matching network comprises a variable matching network connected to the antenna; and a transmit/receive switch having common, receive output and transmit input terminal, and operable between transmit and receive positions, the transmit/receive switch having its common terminal connected to the variable matching network, the transmit/receive switch receive output terminal selectively connectable to a select one of the fourth plurality of receive band pass filters, and the transmit/receive switch transmit input terminal selectively connectable to a select one of the third plurality of transmit power amplifiers as in claim 15;wherein the adjustable matching network comprises a transmit/receive switch having common, receive Output and transmit input terminals, and operable between transmit and receive positions, the transmit/receive switch having its common terminal connected to the antenna, a variable receive matching network connected to the receive output of the transmit/receive switch and selectively connected to a select one of the fourth plurality of receive band pass filters; and a variable transmit matching network connected to the transmit input terminal of the transmit/receive switch and selectively connected to a select one of the third plurality of transmit power amplifiers as in claim 24; and multiple transmit and receive frequency bands using Time Division Multiple Access (TDMA) signal formats, the wireless communications device comprising, a control processing unit receiving and processing the mismatch indication signals and providing adjustment control signals to the variable matching network during a portion of the TDMA frame period not utilized by the wireless communications device for transmission as in claim 34.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (703) 305-4735. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Tesfaldet Bocure
Primary Examiner
Art Unit 2631

T.Bocure
May 12, 2003